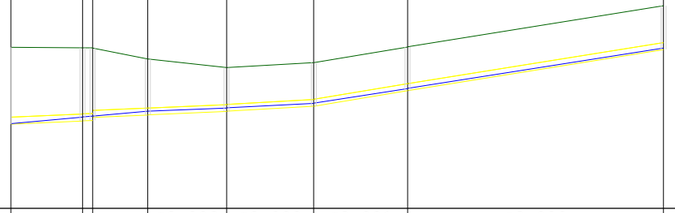
Appendix J

Micro Drainage Outputs

MH Name	SDargle River	SW1.007	SW1.006	SW1.005			SW1.001	SW1.000	
Hor Scale 1500 Ver Scale 200 Datum (m)-1.000									
PN		S1.007	S1.006	S1.005			S1.001	S1.000	
Dia (mm)		600	450	225			225	225	
Slope (1:X)		65.7	167.8	34.4			166.7	167.2	
Cover Level (m)	3.000	2.760	4.003	6.144	6.410	6.500	6.180	6.475	
Invert Level (m)		-0.280 / 1.480	1.373 / 1.610	1.900 / 3.800	4.144 / 4.240	4.352 / 4.444	4.444 / 4.746	4.746 / 5.050	
Length (m)		115.715	39.774	65.318			50.357	50.789	

MH Name	SW1.006	SW2.005	SW2.004	SW2.003	SW2.002	SW2.001	SW2.000	
Hor Scale 1500 Ver Scale 200 Datum (m)1.954								
PN		S2.005	S2.004	S2.003	S2.002	S2.001	S2.000	
Dia (mm)		450	450	300	300	300	300	
Slope (1:X)		297.3	344.4	18.2	47.4	198.9	207.9	
Cover Level (m)	4.003	3.394	5.233	7.220	7.750	7.520	11.500	
Invert Level (m)		1.610 / 1.850	1.850 / 1.920	1.920 / 4.560	4.510 / 6.282	6.282 / 6.490	6.490 / 6.602	
Length (m)		71.358	24.107	48.010	83.916	41.361	23.287	

MH Name	SSeapoint Road			SW3.003	SW3.002	SW3.001	SW3.000	
Hor Scale 1500 Ver Scale 200 Datum (m) 0.000								
PN				S3.003	S3.002	S3.001	S3.000	
Dia (mm)				225	225	225	225	
Slope (1:X)				168.2	127.7	44.8	46.7	
Cover Level (m)	5.250	5.232	4.866	4.583	4.750	5.262	6.601	
Invert Level (m)	2.740	2.848	2.963 3.043	3.043 3.158	3.158 3.325	3.325 3.837	3.837 5.176	
Length (m)				19.265	21.324	22.959	62.568	

STORM SEWER DESIGN by the Modified Rational Method

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
S1.000	50.789	0.304	167.2	0.072	4.00	0.0	0.600	o	225	Pipe/Conduit	
S1.001	50.357	0.302	166.7	0.057	0.00	0.0	0.600	o	225	Pipe/Conduit	
S1.002	15.457	0.093	166.7	0.070	0.00	0.0	0.600	o	225	Pipe/Conduit	
S1.003	2.597	0.012	216.4	0.002	0.00	0.0	0.600	o	225	Pipe/Conduit	
S1.004	16.091	0.096	167.6	0.019	0.00	0.0	0.600	o	225	Pipe/Conduit	
S1.005	65.318	1.900	34.4	0.054	0.00	0.0	0.600	o	225	Pipe/Conduit	
S2.000	23.287	0.112	207.9	0.000	4.00	11.1	0.600	o	300	Pipe/Conduit	
S2.001	41.361	0.208	198.9	0.045	0.00	0.0	0.600	o	300	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S1.000	50.00	4.84	5.050	0.072	0.0	0.0	1.9	1.01	40.1	11.7
S1.001	50.00	5.67	4.746	0.129	0.0	0.0	3.5	1.01	40.1	21.0
S1.002	50.00	5.93	4.444	0.199	0.0	0.0	5.4	1.01	40.1	32.3
S1.003	50.00	5.97	4.352	0.201	0.0	0.0	5.4	0.88	35.2	32.6
S1.004	50.00	6.24	4.240	0.219	0.0	0.0	5.9	1.01	40.0	35.6
S1.005	50.00	6.73	3.800	0.274	0.0	0.0	7.4	2.24	89.0	44.5
S2.000	50.00	4.36	6.602	0.000	11.1	0.0	2.2	1.09	76.8	13.3
S2.001	50.00	4.98	6.490	0.045	11.1	0.0	3.4	1.11	78.6	20.7

STORM SEWER DESIGN by the Modified Rational Method

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
S2.002	83.916	1.772	47.4	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
S2.003	48.010	2.640	18.2	0.091	0.00	0.0	0.600	o	300	Pipe/Conduit	
S2.004	24.107	0.070	344.4	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
S2.005	71.358	0.240	297.3	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
S1.006	39.774	0.237	167.8	0.074	0.00	0.0	0.600	o	450	Pipe/Conduit	
S1.007	115.715	1.760	65.7	0.051	0.00	0.0	0.600	o	600	Pipe/Conduit	
S3.000	62.568	1.339	46.7	0.054	4.00	0.0	0.600	o	225	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S2.002	50.00	5.59	6.282	0.045	11.1	0.0	3.4	2.29	161.9	20.7
S2.003	50.00	5.80	4.560	0.136	11.1	0.0	5.9	3.70	261.8	35.5
S2.004	50.00	6.17	1.920	0.136	11.1	0.0	5.9	1.09	173.3	35.5
S2.005	50.00	7.19	1.850	0.136	11.1	0.0	5.9	1.17	186.7	35.5
S1.006	50.00	7.61	1.610	0.484	11.1	0.0	15.3	1.57	249.1	91.9
S1.007	50.00	8.25	1.480	0.535	11.1	0.0	16.7	3.01	850.1	100.3
S3.000	50.00	4.54	5.176	0.054	0.0	0.0	1.5	1.92	76.3	8.8

STORM SEWER DESIGN by the Modified Rational Method

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
S3.001	22.959	0.512	44.8	0.057	0.00	0.0	0.600	o	225	Pipe/Conduit	
S3.002	21.324	0.167	127.7	0.021	0.00	0.0	0.600	o	225	Pipe/Conduit	
S3.003	19.265	0.115	168.2	0.020	0.00	0.0	0.600	o	225	Pipe/Conduit	
S3.004	13.489	0.080	168.2	0.023	0.00	0.0	0.600	o	225	Pipe/Conduit	
S3.005	2.477	0.015	165.1	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
S3.006	17.524	0.108	162.3	0.024	0.00	0.0	0.600	o	225	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S3.001	50.00	4.74	3.837	0.111	0.0	0.0	3.0	1.96	77.9	18.0
S3.002	50.00	5.05	3.325	0.132	0.0	0.0	3.6	1.16	45.9	21.4
S3.003	50.00	5.37	3.158	0.151	0.0	0.0	4.1	1.01	40.0	24.6
S3.004	50.00	5.59	3.043	0.175	0.0	0.0	4.7	1.01	40.0	28.4
S3.005	50.00	5.63	2.863	0.175	0.0	0.0	4.7	1.01	40.3	28.4
S3.006	50.00	5.92	2.848	0.198	0.0	0.0	5.4	1.02	40.7	32.3

Manhole Schedules for Storm

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
SW1.000	6.475	1.425	Open Manhole	1200	S1.000	5.050	225				
SW1.001	6.180	1.434	Open Manhole	1200	S1.001	4.746	225	S1.000	4.746	225	
SW1.002	6.500	2.056	Open Manhole	1200	S1.002	4.444	225	S1.001	4.444	225	
SW1.003	6.420	2.068	Open Manhole	1200	S1.003	4.352	225	S1.002	4.352	225	
SW1.004	6.410	2.170	Open Manhole	1200	S1.004	4.240	225	S1.003	4.340	225	100
SW1.005	6.144	2.344	Open Manhole	1200	S1.005	3.800	225	S1.004	4.144	225	344
SW2.000	11.500	4.898	Open Manhole	1200	S2.000	6.602	300				
SW2.001	7.520	1.030	Open Manhole	1200	S2.001	6.490	300	S2.000	6.490	300	
SW2.002	7.750	1.468	Open Manhole	1200	S2.002	6.282	300	S2.001	6.282	300	
SW2.003	7.220	2.710	Open Manhole	1200	S2.003	4.560	300	S2.002	4.510	300	
SW2.004	5.233	3.313	Open Manhole	1500	S2.004	1.920	450	S2.003	1.920	300	
SW2.005	3.394	1.544	Open Manhole	1500	S2.005	1.850	450	S2.004	1.850	450	
SW1.006	4.003	2.393	Open Manhole	1500	S1.006	1.610	450	S1.005	1.900	225	65
								S2.005	1.610	450	
SW1.007	2.760	1.387	Open Manhole	1500	S1.007	1.480	600	S1.006	1.373	450	
SDargle River	3.000	3.280	Open Manhole	0		OUTFALL		S1.007	-0.280	600	
SW3.000	6.601	1.425	Open Manhole	1200	S3.000	5.176	225				
SW3.001	5.262	1.425	Open Manhole	1200	S3.001	3.837	225	S3.000	3.837	225	

Manhole Schedules for Storm

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
SW3.002	4.750	1.425	Open Manhole	1200	S3.002	3.325	225	S3.001	3.325	225	
SW3.003	4.583	1.425	Open Manhole	1200	S3.003	3.158	225	S3.002	3.158	225	
SW3.004	4.866	1.823	Open Manhole	1200	S3.004	3.043	225	S3.003	3.043	225	
SW3.005	5.225	2.362	Open Manhole	1200	S3.005	2.863	225	S3.004	2.963	225	100
SW3.006	5.232	2.384	Open Manhole	1200	S3.006	2.848	225	S3.005	2.848	225	
SSeapoint Road	5.250	2.510	Open Manhole	0		OUTFALL		S3.006	2.740	225	

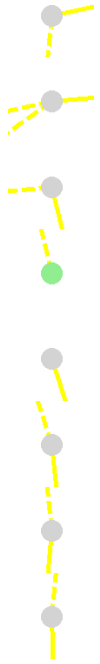
MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
SW1.000	726627.889	719275.997	726627.889	719275.997	Required	
SW1.001	726582.646	719299.077	726582.646	719299.077	Required	
SW1.002	726537.771	719321.923	726537.771	719321.923	Required	

Manhole Schedules for Storm

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
SW1.003	726541.680	719336.878	726541.680	719336.878	Required	
SW1.004	726543.971	719338.101	726543.971	719338.101	Required	
SW1.005	726558.071	719345.854	726558.071	719345.854	Required	
SW2.000	726353.058	719315.114	726353.058	719315.114	Required	
SW2.001	726372.717	719302.632	726372.717	719302.632	Required	
SW2.002	726410.334	719319.829	726410.334	719319.829	Required	
SW2.003	726491.593	719340.780	726491.593	719340.780	Required	
SW2.004	726539.484	719344.166	726539.484	719344.166	Required	

Manhole Schedules for Storm

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
SW2.005	726541.885	719368.152	726541.885	719368.152	Required	
SW1.006	726611.628	719383.245	726611.628	719383.245	Required	
SW1.007	726651.256	719386.646	726651.256	719386.646	Required	
SDargle River	726678.665	719274.224			No Entry	
SW3.000	726699.504	719203.864	726699.504	719203.864	Required	
SW3.001	726718.655	719144.298	726718.655	719144.298	Required	
SW3.002	726721.089	719121.468	726721.089	719121.468	Required	
SW3.003	726719.100	719100.237	726719.100	719100.237	Required	



Manhole Schedules for Storm

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
SW3.004	726719.678	719080.981	726719.678	719080.981	Required	
SW3.005	726732.590	719077.078	726732.590	719077.078	Required	
SW3.006	726734.961	719076.362	726734.961	719076.362	Required	
SSeapoint Road	726752.433	719077.723			No Entry	

Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
S1.007	SDargle River	3.000	-0.280	-0.280	0	0

Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
S3.006	SSeapoint Road	5.250	2.740	2.740	0	0

Simulation Criteria for Storm

Volumetric Runoff Coeff	0.750	Manhole Headloss Coeff (Global)	0.500	Inlet Coeffiecient	0.800
Areal Reduction Factor	1.000	Foul Sewage per hectare (l/s)	0.000	Flow per Person per Day (l/per/day)	0.000
Hot Start (mins)	0	Additional Flow - % of Total Flow	20.000	Run Time (mins)	60
Hot Start Level (mm)	0	MADD Factor * 10m³/ha Storage	2.000	Output Interval (mins)	1

Number of Input Hydrographs	0	Number of Offline Controls	0	Number of Time/Area Diagrams	0
Number of Online Controls	0	Number of Storage Structures	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR	M5-60 (mm)	16.400	Cv (Summer)	0.750
Return Period (years)	100	Ratio R	0.253	Cv (Winter)	0.840
Region	Scotland and Ireland	Profile Type	Summer	Storm Duration (mins)	30

1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor 1.000 Manhole Headloss Coeff (Global) 0.500 MADD Factor * 10m³/ha Storage 2.000
Hot Start (mins) 0 Foul Sewage per hectare (l/s) 0.000 Inlet Coeffiecient 0.800
Hot Start Level (mm) 0 Additional Flow - % of Total Flow 20.000 Flow per Person per Day (l/per/day) 0.000

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
Number of Online Controls 0 Number of Storage Structures 0 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 16.700 Cv (Summer) 0.750
Region Scotland and Ireland Ratio R 0.253 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0 DTS Status ON Inertia Status OFF
Analysis Timestep Fine DVD Status OFF

Profile(s) Summer and Winter
Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years) 1, 30, 100
Climate Change (%) 0, 0, 0

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
S1.000	SW1.000	15 Winter	1	+0%	100/15 Summer				5.129	-0.146	0.000	0.25		9.7	OK
S1.001	SW1.001	15 Winter	1	+0%	30/15 Summer				4.848	-0.123	0.000	0.40		15.6	OK

1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Level Exceeded
S1.000	SW1.000	
S1.001	SW1.001	

1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
S1.002	SW1.002	15 Winter	1	+0%	30/15 Summer				4.578	-0.092	0.000	0.65		23.0	OK
S1.003	SW1.003	15 Winter	1	+0%	30/15 Summer				4.509	-0.068	0.000	0.83		23.1	OK
S1.004	SW1.004	15 Winter	1	+0%	30/15 Summer				4.380	-0.085	0.000	0.70		24.7	OK
S1.005	SW1.005	15 Winter	1	+0%					3.892	-0.133	0.000	0.35		30.1	OK
S2.000	SW2.000	30 Winter	1	+0%					6.692	-0.210	0.000	0.20		13.3	OK
S2.001	SW2.001	15 Winter	1	+0%					6.592	-0.198	0.000	0.25		18.4	OK
S2.002	SW2.002	15 Winter	1	+0%					6.350	-0.232	0.000	0.12		18.3	OK
S2.003	SW2.003	15 Winter	1	+0%					4.627	-0.233	0.000	0.11		28.2	OK
S2.004	SW2.004	15 Winter	1	+0%					2.055	-0.315	0.000	0.19		28.1	OK
S2.005	SW2.005	15 Winter	1	+0%					1.970	-0.330	0.000	0.16		27.6	OK
S1.006	SW1.006	15 Winter	1	+0%					1.775	-0.285	0.000	0.29		63.9	OK
S1.007	SW1.007	15 Winter	1	+0%					1.598	-0.482	0.000	0.08		67.6	OK
S3.000	SW3.000	15 Winter	1	+0%					5.224	-0.177	0.000	0.10		7.6	OK
S3.001	SW3.001	15 Winter	1	+0%	100/15 Winter				3.905	-0.157	0.000	0.20		13.9	OK
S3.002	SW3.002	15 Winter	1	+0%	30/15 Summer				3.423	-0.127	0.000	0.39		16.3	OK
S3.003	SW3.003	15 Winter	1	+0%	30/15 Summer				3.272	-0.111	0.000	0.51		18.3	OK
S3.004	SW3.004	15 Winter	1	+0%	30/15 Summer				3.170	-0.098	0.000	0.60		20.7	OK
S3.005	SW3.005	15 Winter	1	+0%	30/15 Summer				3.009	-0.079	0.000	0.75		20.9	OK
S3.006	SW3.006	15 Winter	1	+0%	30/15 Summer				2.979	-0.094	0.000	0.64		23.1	OK

1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Level Exceeded
S1.002	SW1.002	
S1.003	SW1.003	
S1.004	SW1.004	
S1.005	SW1.005	
S2.000	SW2.000	
S2.001	SW2.001	
S2.002	SW2.002	
S2.003	SW2.003	
S2.004	SW2.004	
S2.005	SW2.005	
S1.006	SW1.006	
S1.007	SW1.007	
S3.000	SW3.000	
S3.001	SW3.001	
S3.002	SW3.002	
S3.003	SW3.003	
S3.004	SW3.004	
S3.005	SW3.005	
S3.006	SW3.006	

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor 1.000 Manhole Headloss Coeff (Global) 0.500 MADD Factor * 10m³/ha Storage 2.000
Hot Start (mins) 0 Foul Sewage per hectare (l/s) 0.000 Inlet Coeffiecient 0.800
Hot Start Level (mm) 0 Additional Flow - % of Total Flow 20.000 Flow per Person per Day (l/per/day) 0.000

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
Number of Online Controls 0 Number of Storage Structures 0 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 16.700 Cv (Summer) 0.750
Region Scotland and Ireland Ratio R 0.253 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0 DTS Status ON Inertia Status OFF
Analysis Timestep Fine DVD Status OFF

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	1, 30, 100
Climate Change (%)	0, 0, 0

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)
S1.000	SW1.000	15 Winter	30	+0%	100/15 Summer				5.175	-0.100	0.000	0.56		21.6
S1.001	SW1.001	15 Winter	30	+0%	30/15 Summer				5.049	0.078	0.000	0.82		31.6

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Status	Level Exceeded
S1.000	SW1.000	OK	
S1.001	SW1.001	SURCHARGED	

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)
S1.002	SW1.002	15 Winter	30	+0%	30/15 Summer				4.842	0.172	0.000	1.32		46.8
S1.003	SW1.003	15 Winter	30	+0%	30/15 Summer				4.676	0.099	0.000	1.71		47.3
S1.004	SW1.004	15 Winter	30	+0%	30/15 Summer				4.561	0.096	0.000	1.44		51.3
S1.005	SW1.005	15 Winter	30	+0%					3.948	-0.077	0.000	0.74		63.8
S2.000	SW2.000	30 Winter	30	+0%					6.692	-0.210	0.000	0.20		13.3
S2.001	SW2.001	15 Winter	30	+0%					6.617	-0.173	0.000	0.37		27.0
S2.002	SW2.002	15 Winter	30	+0%					6.366	-0.216	0.000	0.17		27.0
S2.003	SW2.003	15 Winter	30	+0%					4.656	-0.204	0.000	0.22		54.2
S2.004	SW2.004	15 Winter	30	+0%					2.112	-0.258	0.000	0.37		53.5
S2.005	SW2.005	15 Winter	30	+0%					2.020	-0.280	0.000	0.30		51.4
S1.006	SW1.006	15 Winter	30	+0%					1.859	-0.201	0.000	0.59		129.6
S1.007	SW1.007	15 Winter	30	+0%					1.648	-0.432	0.000	0.17		137.5
S3.000	SW3.000	15 Winter	30	+0%					5.249	-0.152	0.000	0.23		17.0
S3.001	SW3.001	15 Winter	30	+0%	100/15 Winter				3.948	-0.114	0.000	0.49		34.7
S3.002	SW3.002	15 Winter	30	+0%	30/15 Summer				3.647	0.097	0.000	0.88		36.9
S3.003	SW3.003	15 Winter	30	+0%	30/15 Summer				3.530	0.147	0.000	1.10		39.9
S3.004	SW3.004	15 Winter	30	+0%	30/15 Summer				3.390	0.122	0.000	1.29		44.7
S3.005	SW3.005	15 Winter	30	+0%	30/15 Summer				3.252	0.164	0.000	1.60		44.7
S3.006	SW3.006	15 Winter	30	+0%	30/15 Summer				3.153	0.080	0.000	1.35		49.2

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Status	Level Exceeded
S1.002	SW1.002	SURCHARGED	
S1.003	SW1.003	SURCHARGED	
S1.004	SW1.004	SURCHARGED	
S1.005	SW1.005	OK	
S2.000	SW2.000	OK	
S2.001	SW2.001	OK	
S2.002	SW2.002	OK	
S2.003	SW2.003	OK	
S2.004	SW2.004	OK	
S2.005	SW2.005	OK	
S1.006	SW1.006	OK	
S1.007	SW1.007	OK	
S3.000	SW3.000	OK	
S3.001	SW3.001	OK	
S3.002	SW3.002	SURCHARGED	
S3.003	SW3.003	SURCHARGED	
S3.004	SW3.004	SURCHARGED	
S3.005	SW3.005	SURCHARGED	
S3.006	SW3.006	SURCHARGED	

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor 1.000 Manhole Headloss Coeff (Global) 0.500 MADD Factor * 10m³/ha Storage 2.000
Hot Start (mins) 0 Foul Sewage per hectare (l/s) 0.000 Inlet Coeffiecient 0.800
Hot Start Level (mm) 0 Additional Flow - % of Total Flow 20.000 Flow per Person per Day (l/per/day) 0.000

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
Number of Online Controls 0 Number of Storage Structures 0 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 16.700 Cv (Summer) 0.750
Region Scotland and Ireland Ratio R 0.253 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0 DTS Status ON Inertia Status OFF
Analysis Timestep Fine DVD Status OFF

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	1, 30, 100
Climate Change (%)	0, 0, 0

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)
S1.000	SW1.000	15 Winter	100	+0%	100/15 Summer				5.460	0.185	0.000	0.67		25.9
S1.001	SW1.001	15 Winter	100	+0%	30/15 Summer				5.369	0.397	0.000	0.97		37.2

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Status	Level Exceeded
S1.000	SW1.000	SURCHARGED	
S1.001	SW1.001	SURCHARGED	

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)
S1.002	SW1.002	15 Winter	100	+0%	30/15 Summer				5.063	0.393	0.000	1.59		56.3
S1.003	SW1.003	15 Winter	100	+0%	30/15 Summer				4.814	0.237	0.000	2.06		56.9
S1.004	SW1.004	15 Winter	100	+0%	30/15 Summer				4.651	0.186	0.000	1.74		61.8
S1.005	SW1.005	15 Winter	100	+0%					3.970	-0.055	0.000	0.90		77.4
S2.000	SW2.000	30 Winter	100	+0%					6.692	-0.210	0.000	0.20		13.3
S2.001	SW2.001	15 Winter	100	+0%					6.628	-0.162	0.000	0.43		31.1
S2.002	SW2.002	15 Winter	100	+0%					6.373	-0.209	0.000	0.20		31.0
S2.003	SW2.003	15 Winter	100	+0%					4.667	-0.193	0.000	0.27		66.3
S2.004	SW2.004	15 Winter	100	+0%					2.136	-0.234	0.000	0.45		65.4
S2.005	SW2.005	15 Winter	100	+0%					2.040	-0.260	0.000	0.36		62.7
S1.006	SW1.006	15 Winter	100	+0%					1.897	-0.163	0.000	0.72		160.1
S1.007	SW1.007	15 Winter	100	+0%					1.669	-0.411	0.000	0.21		170.2
S3.000	SW3.000	15 Winter	100	+0%					5.260	-0.141	0.000	0.30		22.0
S3.001	SW3.001	15 Winter	100	+0%	100/15 Winter				4.088	0.026	0.000	0.59		42.2
S3.002	SW3.002	15 Winter	100	+0%	30/15 Summer				3.958	0.408	0.000	1.01		42.1
S3.003	SW3.003	15 Winter	100	+0%	30/15 Summer				3.792	0.409	0.000	1.31		47.2
S3.004	SW3.004	15 Winter	100	+0%	30/15 Summer				3.595	0.326	0.000	1.55		53.7
S3.005	SW3.005	15 Winter	100	+0%	30/15 Summer				3.399	0.311	0.000	1.93		53.8
S3.006	SW3.006	15 Winter	100	+0%	30/15 Summer				3.255	0.182	0.000	1.65		60.1

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Status	Level Exceeded
S1.002	SW1.002	SURCHARGED	
S1.003	SW1.003	SURCHARGED	
S1.004	SW1.004	SURCHARGED	
S1.005	SW1.005	OK	
S2.000	SW2.000	OK	
S2.001	SW2.001	OK	
S2.002	SW2.002	OK	
S2.003	SW2.003	OK	
S2.004	SW2.004	OK	
S2.005	SW2.005	OK	
S1.006	SW1.006	OK	
S1.007	SW1.007	OK	
S3.000	SW3.000	OK	
S3.001	SW3.001	SURCHARGED	
S3.002	SW3.002	SURCHARGED	
S3.003	SW3.003	SURCHARGED	
S3.004	SW3.004	SURCHARGED	
S3.005	SW3.005	SURCHARGED	
S3.006	SW3.006	SURCHARGED	